

ADAPTIVE VOLTAGE SCALING CLOCK GENERATOR FOR USE
IN A DIGITAL PROCESSING COMPONENT AND
METHOD OF OPERATING THE SAME

ABSTRACT OF THE DISCLOSURE

There is disclosed clock control circuitry for selectively applying a clock signal to a digital processing component wherein the clock signal is capable of being changed to a plurality of operating frequencies. The clock control circuitry is operable to (i) receive a command to change a first operating frequency to a second operating frequency, (ii) in response to the command, disable the applied clock signal, (iii) generate a test clock signal having the second operating frequency, (iv) apply the test clock signal to a power supply adjustment circuit, and (v) sense a status signal from the power supply adjustment circuit. The status signal indicates that a power supply level of the digital processing component has been adjusted to an optimum value suitable for the second operating frequency.